

CLAIM SET AS AMENDED

1. (Currently Amended) An optical device unit in which light exiting from a first optical fiber is converged by a lens to travel toward a reflection-type optical element, ~~part or the whole~~ part of or all of the light exiting from the first optical fiber is reflected by the reflection-type optical element and is converged by the lens to be coupled to a second optical fiber,

wherein the lens of the optical device unit ~~being characterized in that the lens is~~ constituted by a first and second lenses adapted to the corresponding optical fibers; ~~the~~

a distance between ~~the~~ optical axes of the first and second optical fibers is larger than ~~the~~ a distance between ~~the~~ optical axis centers of the first and second lenses; ~~the~~

a light exit end of the first optical fiber, the optical axis center of the first lens and ~~the~~ a reflection point on the reflection-type optical element are placed in line; and

the reflection point on the reflection-type optical element, the optical axis center of the second lens and the entrance end of the second optical fiber are placed in line.

2. (Currently Amended) The optical device unit according to claim 1, ~~characterized in that~~ wherein the optical fibers are multimode optical fibers;

the light exit end of the first optical fiber and the reflection point on the reflection-type optical element are in a geometric-optical conjugate relationship with each other; and

the light entrance end of the second optical fiber and the reflection point on the reflection-type optical element are also in a geometric-optical conjugate relationship with each other.

3. (Currently Amended) The optical device unit according to claim 1, ~~characterized in that~~ wherein the optical fibers are ~~singlemode~~ single mode optical fibers, and a beam waist of a Gaussian beam is formed at each of the light exit end of the first optical fiber, the reflection point on the reflection-type optical element and the light entrance end of the second optical fiber.

4. (Currently Amended) The optical device unit according to claim 1, ~~characterized in that~~ wherein the lens has means for correcting abaxial aberration.

5. (Currently Amended) The optical device unit according to claim 4, ~~characterized in that~~ wherein the means for correcting abaxial aberration has such a shape as to change the optical power along two axes of the lens perpendicular to each other.

6. (Currently Amended) The optical device unit according to claim 1, ~~characterized in that~~ wherein the reflection-type optical element is one of a demultiplexing filter, a movable mirror and a photodetector.

7. (Currently Amended) ~~An optical~~ The optical device according to claim 1
~~characterized in that wherein~~ a plurality of the optical device units ~~according to claim 1~~ are
arranged linearly or two-dimensionally one adjacent to another.

8. (Currently Amended) An optical device unit in which an optical fiber for exit and
an optical fiber for entrance are placed in a pair on at least one of left and right sides of a
semitransparent optical element opposite;

light exiting from the optical fiber for exit on one of the left and right sides is
converged by lens means; and

the converged light is caused to pass through the semitransparent optical element or
reflected by the semitransparent optical element to selectively be coupled to the left and right
optical fibers for entrance,

wherein the lens means of the optical device unit ~~being characterized in that the lens~~
~~means~~ is constituted by a pair of lenses adapted to the pair of optical fibers for exit and
entrance; ~~the~~

a distance between the optical axes of the pair of optical fibers for exit and entrance is
larger than the distance between the optical axis centers of the pair of lenses; and ~~the~~

a light exit end or the light entrance end of each optical fiber, ~~the~~ an optical axis
center of the lens corresponding to each optical fiber and the transmission point or the
reflection point on the semitransparent optical element are placed in line.

9. (Currently Amended) The optical device unit according to claim 8, ~~characterized in that~~ wherein the optical fibers are multimode optical fibers;

the light exit end of the optical fiber for exit and the transmission point or the reflection point on the semitransparent optical element are in a geometric-optical conjugate relationship with each other; and

the light entrance end of the optical fiber for entrance and the transmission point or the reflection point on the semitransparent optical element are also in a geometric-optical conjugate relationship with each other.

10. (Currently Amended) The optical device unit according to claim 8, ~~characterized in that~~ wherein the optical fibers are ~~singlemode~~ single mode optical fibers, and a beam waist of a Gaussian beam is formed at each of the light exit end of the optical fiber for exit, the transmission point or the reflection point on the semitransparent optical element and the light entrance end of the optical fiber for entrance.

11. (Currently Amended) The optical device unit according to claim 8, ~~characterized in that~~ wherein the lens has means for correcting abaxial aberration.

12. (Currently Amended) The optical device unit according to claim 11, ~~characterized in that~~ wherein the means for correcting abaxial aberration has such a shape as to change the optical power along two axes of the lens perpendicular to each other.

13. (Currently Amended) The optical device unit according to claim 8, ~~characterized in that~~ wherein the semitransparent optical element is a demultiplexing filter or a reflection/transmission switching element ~~such as~~ including a liquid crystal shutter.

14. (Currently Amended) ~~An optical~~ The optical device according to claim 8, ~~characterized in that~~ wherein a plurality of the optical device units ~~according to claim 8~~ are arranged linearly or two-dimensionally one adjacent to another.

15. (Currently Amended) A microlens array having a plurality of lens portions formed on a surface of a transparent substrate,

wherein the microlens array ~~being characterized in that~~ includes two lens-lenses in the lens portions-~~form~~ forming a pair, and the lenses forming a pair ~~the pair~~ have such shapes that the lenses are cut along a bisector perpendicular to a line connecting ~~the~~ centers of the lenses ~~as seen and~~ in a direction ~~along the~~ substantially parallel to an optical axis, and ~~the~~ cut portions are brought into abutment on each other.